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Leslie Jae Lenell & Seymour Levine

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Patent Application: 10/822,271
Filing Date: 4/10/2004
Patent Name: SAFELANDER

United States Patent and Trademark Office
Address: Commissioner for Patents
P.O. Box 1450
Alexandria Virginia 22313-1450

C/O Examiner **TUAN C. TO**
ART UNIT: 3663

Dear Mr. To,

The following two pages are clarifications and a typo. error correction of our patent submittal based on your findings. We sincerely hope that this meets with your approval.

Yours truly,

Leslie Jae Lenell
Leslie Jae Lenell

Seymour Levine
Seymour Levine

**Patent Application of
Leslie Jae Lenell and Seymour Levine**

For

TITLE: SAFELANDER

Subject: Clarified claims 16, 19 and 20 to remove examiner's objections.

- 16. A high fidelity synthetic vision remote pilot simulator windshield display or windshield wrap-around display for adding virtual reality capability to the remote pilot simulator.**
- 19. A high fidelity synthetic vision remote pilot simulator windshield display or windshield wrap-around display supplemented with dynamic representations of surrounding ground and in air vehicles that are superimposed on the display based on ATC/M supplied digital data such that it permits the remote pilot in the simulator to reasonably see the aircraft's environment similar to the onboard pilot in the actual aircraft which is/will-be remotely controlled.**
- 20. A high fidelity synthetic vision remote pilot simulator windshield display or windshield wrap-around display supplemented with dynamic representations of surrounding ground and in-air vehicles that are superimposed on the display based on topographic and airport digital data, from a data base, such that the remote pilot in the simulator sees the aircraft environment similar to the pilot in the actual aircraft which is/will-be remotely controlled.**

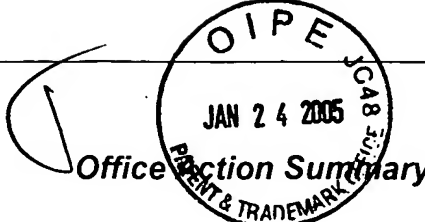
Note on claim 20: Claim 20 had a typo error that erroneously referenced claim 26 instead of 16 on the original patent submittal. Based on the examiner's objections the reference to the windshield wrap-around display of claim ~~26~~ 16 was removed. Claim 20 no longer references any other claim.

a) Note on Claim 16:

Notes on the Margolin and Hodgetts et al on displays . None of the cited references provide the remote pilot with a **“high fidelity synthetic vision”** display necessary for a **“virtual reality”** view of the **aircraft environment as seen by an onboard pilot**. Although they do provide a three-dimensional view of the same environment of a flying aircraft, there is no mention that the view that they provide is essentially the same as that seen by the onboard pilot. Neither Margolin nor Hodgetts has any mention of the ground or in-air environments derived from ATC (Air Traffic Control) or weather data. Instead Margolin depends on video cameras placed aboard the remote aircraft which can’t match the view as seen by the onboard pilot. Margolin’s patent is for RPVs and UAVs, which are pilot-less aircraft. It is the intent of SAFELANDER to accurately capture, via **synthetic vision and virtual reality**, the images seen by the on-board pilot so that the aircraft can be conned safely in congested airspace and on the tarmac/ground. In addition, neither Margolin nor Hodgetts provide the voice communication with ATC and do not cite this link. By their lack of providing voice communication etc., Margolin and Hodgetts have not shown in their patents any intent of providing a **virtual reality** capability. Neither Margolin nor Hodgetts cite a windshield display in either their descriptive text or their claims. A windshield display or windshield wrap-around display that has the visual obscurations is essential for high fidelity, synthetic vision, in a virtual reality cockpit. Safelander, from a visual as well as acoustic sensory sense, does provide this virtual reality perspective capability directly to the remote pilot. It allows licensed commercial aviation pilots to readily and remotely **conn commercial carrier & cargo aircraft safely in congested airspace and on the tarmac** with minimal training. The authors of this patent feel, that this display capability is not obvious to one having ordinary skill in the art at the time of the invention, and is essential since it minimizes pilot training and it maximizes the safety of the public on the ground and in the air, as well as critical edifices.

b) Note on examiner’s presumption:

The examiner has correctly presumed that the subject matter of the various claims was commonly owned, by Leslie Jae Lenell and Seymour Levine, at the time any inventions covered therein were made.



Application No.	Applicant(s)	
10/822,271	LENELL ET AL.	
Examiner	Art Unit	
Tuan C To	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2004 and 02 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15, 17, 18 and 21-41 is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☒ Claim(s) 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/10/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 19 and 20 are objected to because of the following informalities:

The applicant claimed the following: "windshield wrap-around display of claim 16", "windshield wrap-around display of claim 26", however, in claim 16, the applicant just only claimed "windshield display"; in claim 26, windshield wrap-around display" was not claimed. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

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later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Margolin (US 5904724A) and in view of Hodgetts et al. (US 6634885B2).

With respect to claim 16, Margolin directs to a system and method for remotely piloting an aircraft, so then a remote aircraft is controlled by a remote pilot who is provided a three dimensional projected view that represents the environment around the remote aircraft (Margolin, abstract). The remote aircraft simulator shown in figure 6 of Margolin is capable of simulating the behavior of a remote aircraft (Margolin, column 9, lines 34-53). The remote pilot is provided by the three dimensional projected view, the behavior of the aircraft, thus the remote pilot simulator disclosed in Margolin provided the virtual reality of the remote aircraft during simulating.

Margolin does not disclose that the display of the pilot simulator is a windshield display.

The reference to Hodgetts et al. has been cited as teaching a flight simulator to provide the look and feel of a corresponding aircraft in-flight (Hodgetts et al, abstract). As shown in figure 6, the flight simulator includes a windshield display as a display device of the simulated cockpit (10) for displaying the three dimensional image.

Hence it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the pilot simulator as disclosed in

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the system of Margolin by the simulator of Hodgetts et al. so that a remote aircraft can be fully controlled by a remote pilot from a ground location as similar as it is controlled by its flight crew. This provides the advantage in completely controlling the aircraft from a ground station in case of the aircraft has been hijacked by a group of terrorists.

Allowable Subject Matter

After searching some of prior areas that are relevant to the subject matter of the claimed invention, the examiner has found none of the references fairly discloses the limitation as recited in claims 1, 17, 18, 21, and 22. Accordingly, claims 1-15, 17, 18, 21-41 would be allowable. Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. It should be noted that claims 19 and 20 would be allowed if rewritten in independent form as said and after they are amended to overcome the objection indicated in the first paragraph of this office action.

Conclusions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan C To whose telephone number is (703) 308-6273. The examiner can normally be reached on from 8:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703) 305-8233.

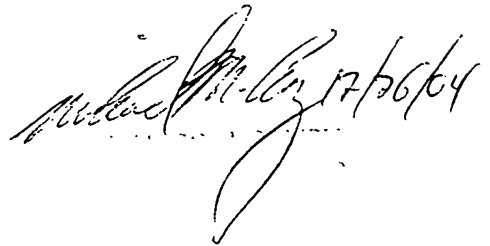
The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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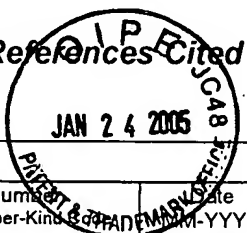
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/tc

December 18, 2004

A handwritten signature in cursive script, followed by the date 12/18/04.

Notice of References Cited



Application/Control No.

10/822,271

Applicant(s)/Patent Under
Reexamination
LENELL ET AL.

Examiner

Tuan C To

Art Unit

3663

Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-2003/0190589	10-2003	Lechner, Robert J.	434/43
	B	US-2003/0127557	07-2003	Anderson et al.	244/1.00R
	C	US-5,137,450	08-1992	Thomas, Melvin L.	434/44
	D	US-2002/0087296	07-2002	Wynn, Owen John Williams	703/8
	E	US-2003/0194683	10-2003	Vorst, Carl J.	434/38
	F	US-6,634,885	10-2003	Hodgetts et al.	434/55
	G	US-6,234,799	05-2001	Lin, Ching-Fang	434/30
	H	US-5,904,724	05-1999	Margolin, Jed	701/120
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

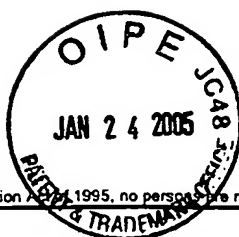
FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



PTO/SB/42 (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
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37 CFR 1.501 INFORMATION DISCLOSURE CITATION IN A PATENT (Sheet 1 of 1) /tc		Docket Number (Optional)	Patent Number			
		Applicant	Issue Date			
		Art Unit				
		LESIE JAE LEWELL & SEYMOUR LEVINE	3663			
U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	U.S. PATENT NO. DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
TC	5,890,079	3/20/99	REMOTE AIRCRAFT RECORDING ADVISORY SYSTEM	701	14	
TC	5,974,349	10/2/99	REMOTE AIRCRAFT, GROUND, PAPERLESS MAINTENANCE SYSTEM	701	29	
TC	5,067,674	11/26/90	CONTROL SYSTEM FOR REMOTE CONTROL AIRCRAFT	244	190	
TC	4,964,598	10/23/90	APPARATUS & METHOD FOR CONTROLLING AIRCRAFT PARTICULARLY REMOTE- CONTROLLED AIRCRAFT	244	190	
FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)						
TC			* LEVINE, SEYMOUR (SY) "CRASHES INTO THE PENTAGON INTO WERE PREVENTABLE"			
			10/6-7/01, PAGES: 5, 6, 7 & 26			
TC			* LEVINE, SEYMOUR (SY) "THE REMOTE FIGHT RECORDING (TELETYPE) SYSTEM CAN SUBSTANTIALLY REDUCE WHILE IN FLIGHT AIRCRAFT ACCIDENTS OPERATIONAL EFFICIENCY AND AIRCRAFT SECURITY"			
			11/17/00 PAGES: 1, 4, 7, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34			
TC			* LEVINE, SEYMOUR (SY) "REMOTE FIGHT RECORDING AND ADVISORY SYSTEMS AND AIRCRAFT TO REDUCE AIRCRAFT ACCIDENTS BY 78%"			
			5/3-5/1999 PAGES: 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270			
EXAMINER	TUAN C TO		DATE CONSIDERED		12/17/2004	

This collection of information is required by 37 CFR 1.501. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

NOTE: * THE PAPER REFERENCES ARE INCLUDED AS ATTACHMENTS
TO THE DISCLOSURE * TYPED REFERENCE